sta

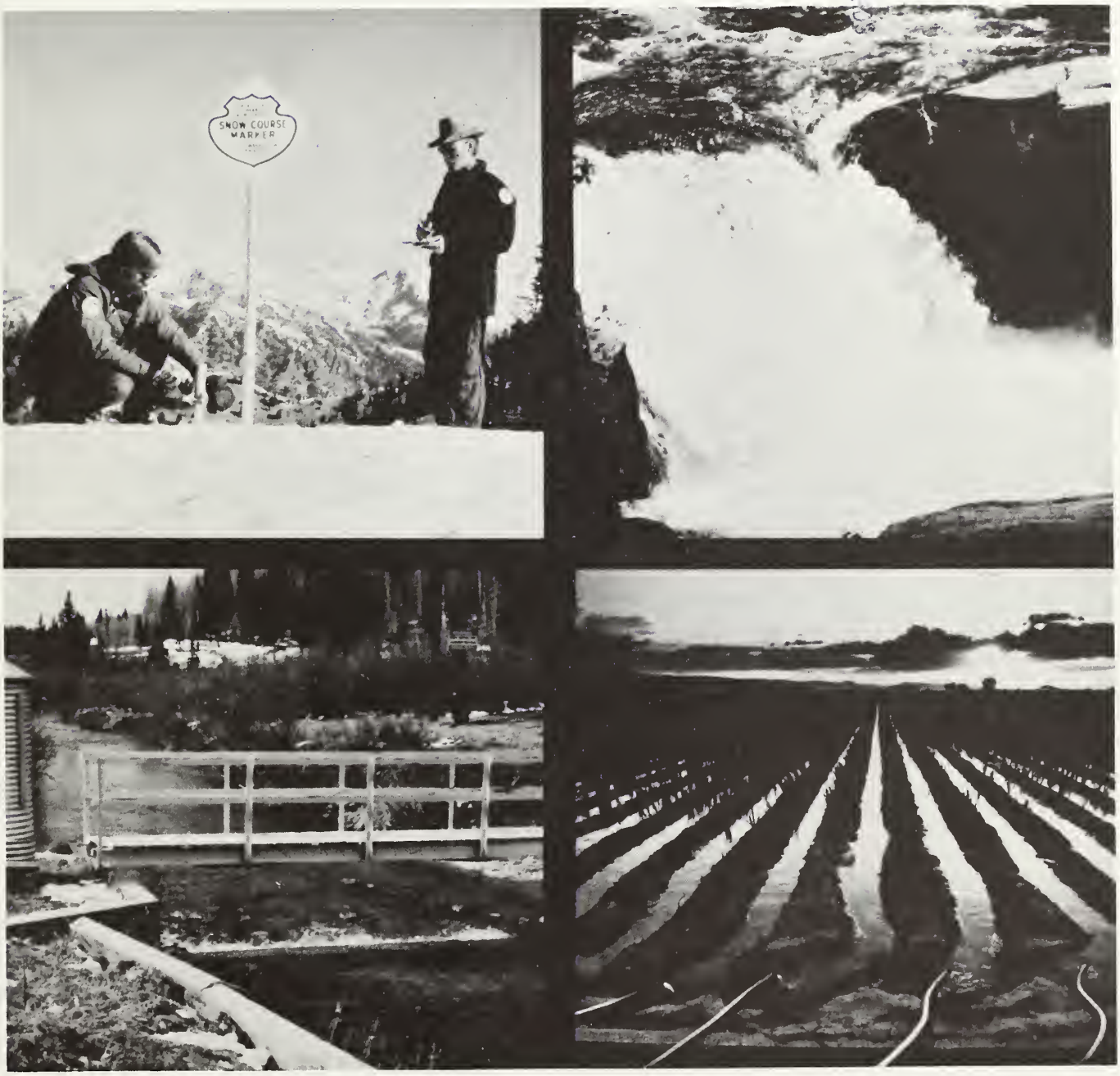
United States
Department of
Agriculture

**Soil
Conservation
Service**

Spokane,
Washington

Washington Water Supply Outlook

FEBRUARY 1, 1988



Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are terms reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado	2490 West 26th Ave., Denver, CO 80211
New Mexico	517 Gold Ave. S.W., Room 3301, Albuquerque, NM 87102-3157
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	1201 Terminal Way, Room 219, Reno, NV 89502
Oregon	1220 Southwest 3rd Ave., Room 1640, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201-1080
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82601

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resouces, P.O. Box 388, Sacramento, CA 95802; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Environment Technical Services Division, 9820 106th St., Edmonton, Alberta T5K 2J6.

Washington
Water Supply Outlook

and

Federal — State — Private
Cooperative Snow Surveys

Issued by

Wilson Scaling
Chief
Soil Conservation Service
Washington, D.C.

Released by

Lynn A. Brown
State Conservationist
Soil Conservation Service
Spokane, Washington

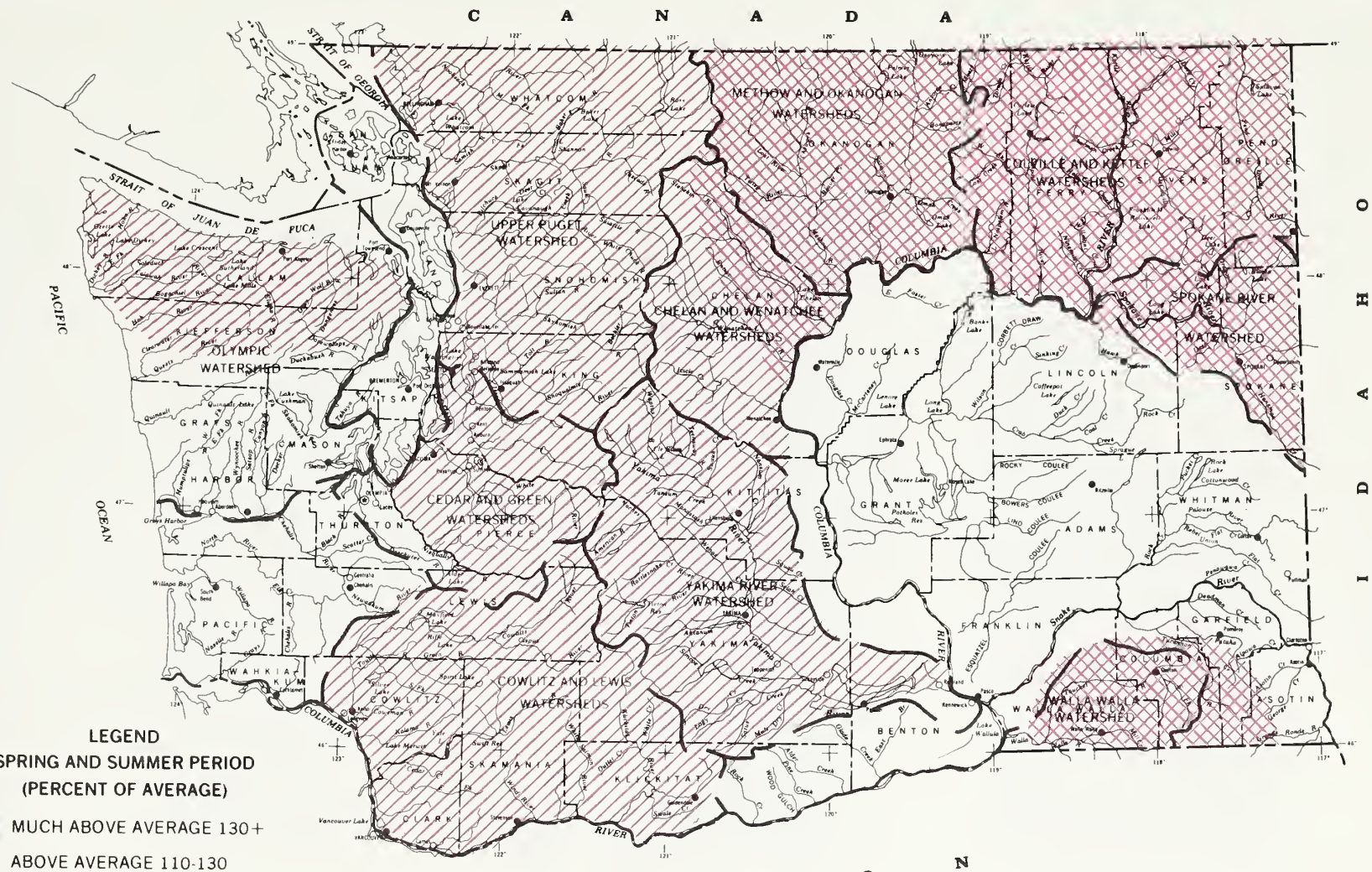
Prepared by

William F. Weller
Water Supply Specialist
Room 360 U.S. Courthouse
Spokane, Washington 99201

TABLE OF CONTENTS

U S DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE



LEGEND
SPRING AND SUMMER PERIOD
(PERCENT OF AVERAGE)

- MUCH ABOVE AVERAGE 130+
- ABOVE AVERAGE 110-130
- NEAR AVERAGE 90-110
- BELOW AVERAGE 70-90
- MUCH BELOW AVERAGE 70+ LESS
- NOT FORECAST
- WATERSHED BOUNDARY

N

FEBRUARY 1, 1988

STREAMFLOW PROSPECTS
WASHINGTON

0 25 50 75 100 MI

0 50 100 150 KM

SOURCE: Data compiled by SCS Field Personnel.

JANUARY 1986 4-R-39641

BASE 4 R-39260

GENERAL OUTLOOK

SUMMARY:

The snowpack, except in the Olympic basins is below to much below normal. Reservoir storage remains below normal at the major irrigation projects throughout the state, with the reservoirs in the Yakima areas much below normal. January streamflow remained low with temperatures below average for most of the month. The January precipitation is below normal statewide. Runoff for 1988 is forecasted to be below to much below normal in Washington. NOTE: There are some helpful hints on conserving water on pasture and rangelands on page 25.

SNOWPACK:

Snow pack in most areas of Washington is below average and varies as follows: the Spokane Basin 53%, Colville - Pend Oreille River 68%, the Wenatchee 85%, Chelan Basin 88%, and the Yakima Basin 81%. On the western slopes of the Cascades the Lewis and Cowlitz Basins are at 69% and the Skagit 76% and Green at 76% of normal. The Olympic area has 110% for the best average around the state. Maximum snow pack is at Morse Lake SNOTEL site in the Yakima Basin, with 41.0 inches of water content.

PRECIPITATION:

January brought below average precipitation over most of Washington. The exception was Walla Walla with 3.3 inches precipitation and 176% of normal. Precipitation values from National Weather Service data for Washington showed the Pend Oreille Basin with 58% of normal and the Spokane with 87%. Other values include the Yakima at 64% and the White-Green Basin with 62%. February 1 precipitation values from SNOTEL sites indicate a water year value near 68% of average for the high mountain areas of Washington. Water year to date precipitation is below average over most of the state. Values vary from 62% of normal in the White-Green Basin to 89% in the Okanogan basin.

RESERVOIRS:

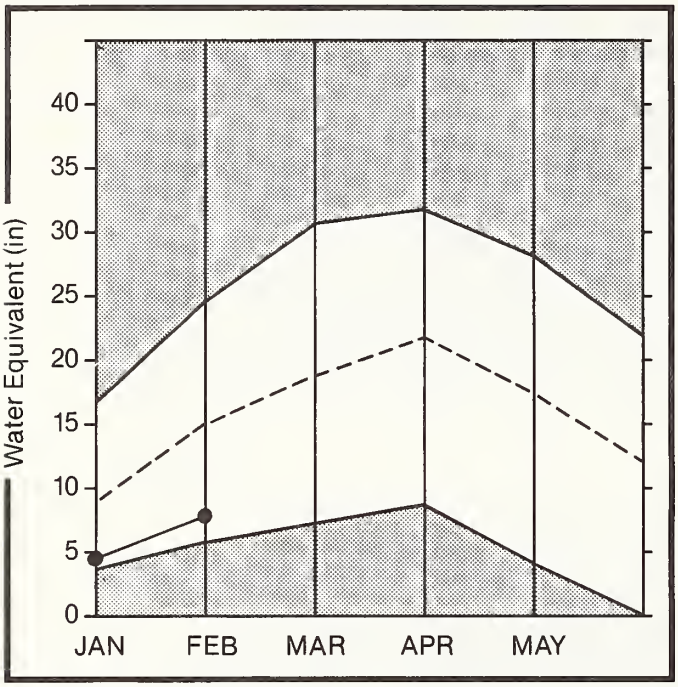
Reservoir storage in the Yakima Basin was 152,500 acre feet, compared to last years 353,200 acre feet or 24% of average. Storage at other major reservoir remains is varied in Washington with Roosevelt at 91% of normal, and Banks Lake at 110%. The Okanogan reservoirs are at 91% of February 1 average. Drafting occurred at many of the power reservoirs with the following: Coeur d' Alene Lake 80,200 down from 110,000 acre feet last month and 36% of capacity, Chelan Lake 191,700 acre feet down from 260,500 acre feet last year and 28% of capacity and Ross Lake at 56% of capacity and 76% of February 1 normal.

STREAMFLOW:

January streamflows continued below normal in Washington. Streamflow varied from 29% on the Spokane River to a maximum of 62% for the Columbia River at the international boundary. On the west side of the Cascade Mountains, runoff from the Chehalis was 53%, the Skagit 48% and the Skykomish 41% of normal. The eastern slope of the Cascades runoff on the Yakima was 41% and the Okanogan at 49% of average. In Eastern Washington streamflow was 42% of normal on the Pend Oreille and 30% on the Kettle River. February 1 streamflow forecasts vary from 59% in the Okanogan River to 86% for the Bumping River.

SPOKANE

Mountain snowpack* (inches)



*Based on selected stations

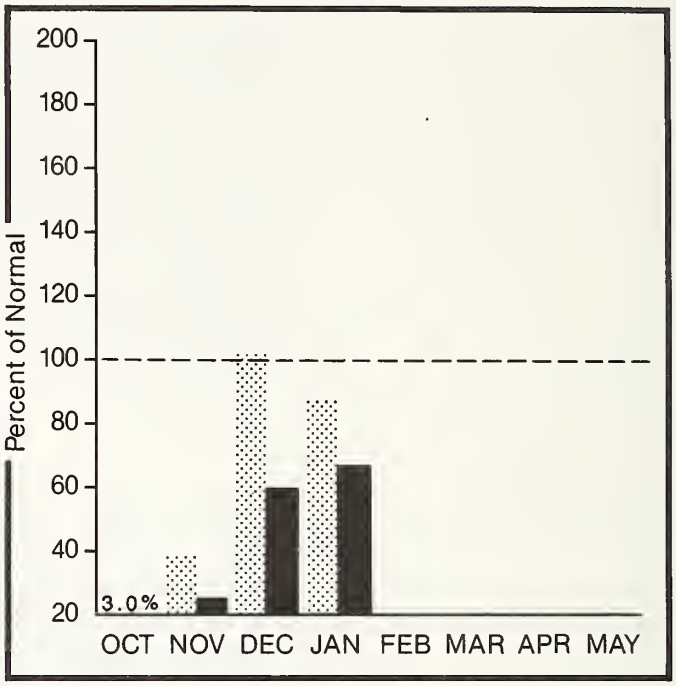
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

SPOKANE RIVER BASIN

WATER SUPPLY OUTLOOK:

Storage in Coeur d' Alene Lake was 80,200 acre feet compared to 88,200 last year; average storage in Cd'A for February 1 is 205,400 acre feet. Storage was drafted for power generation during January. Streamflow on the Spokane River was 29% of average at Spokane. Forecast of runoff for the Spokane River Basin is 62% of normal. This forecast is based upon a snow pack that is 53% of average and a water year to date precipitation value 67% of normal. Precipitation for January was 87% of normal. Maximum snow water occurred at the Lost Lake snow course, elevation 6110 feet with 21.0 inches of water content.

For more information contact your local Soil Conservation Service office.

SPOKANE RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
SPOKANE at Post Falls	APR-SEP	2820.0	1750.0	62	3100.0	110	575.0	20
	APR-JUL	2723.0	1720.0	63	3000.0	110	545.0	20
SPOKANE at Long Lake	APR-JUL	3045.0	1890.0	62	3700.0	122	750.0	25

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.
COEUR D'ALENE	222.8	80.2	88.2	205.4

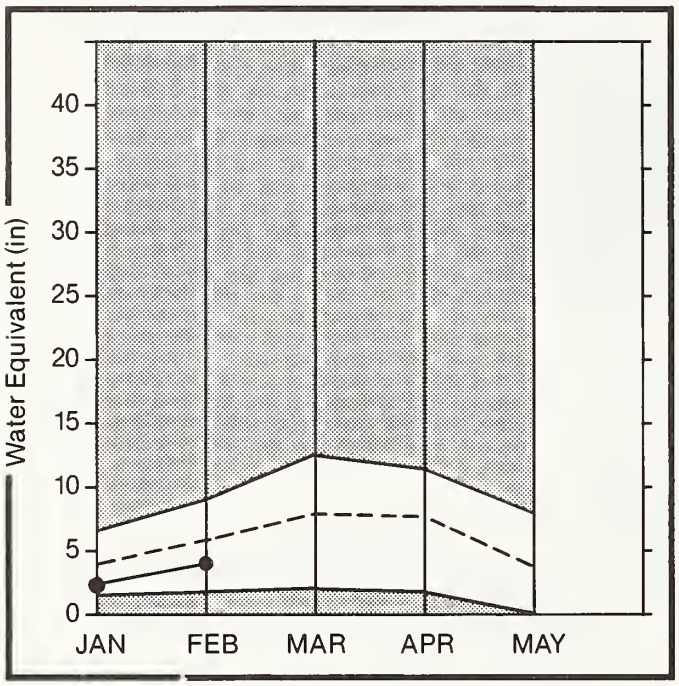
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	AVERAGE
Spokane River	13	79	55

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

COLVILLE AND PEND OREILLE

Mountain snowpack* (inches)



*Based on selected stations

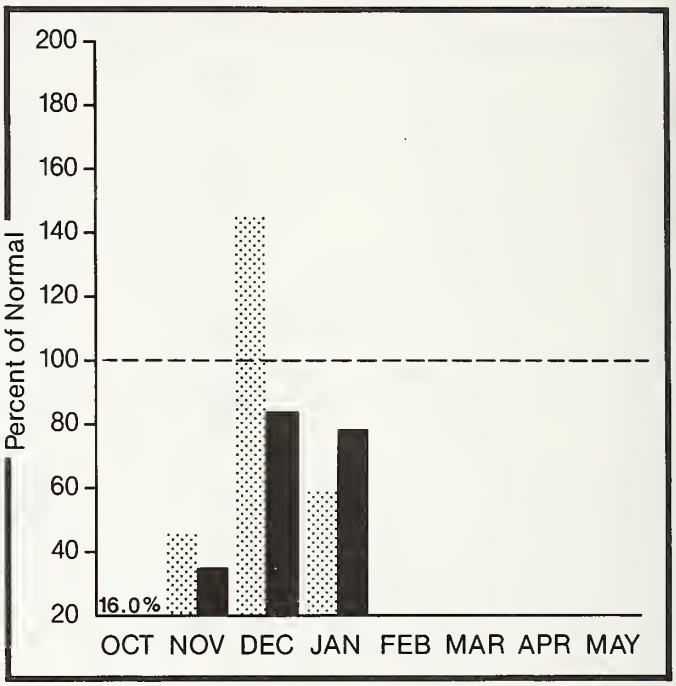
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

COLVILLE - PEND OREILLE RIVER BASINS

WATER SUPPLY OUTLOOK:

Precipitation during January was 58% of average, bringing the water year to date to 77% of normal. Snow cover basin-wide is 68% of average. Maximum snow pack measurement for the basin was at Schweitzer Ridge with 23.6 inches of water. Streamflows for January were 42% of average on the Pend Oreille River, 30% on the Kettle River (ice on the gage) and 62% on the Columbia River at the International Border. Forecasts for the Pend Oreille River are for flows to be 63% of normal for the summer. Other forecasts are 73%, for the Kettle, up from 67% last month and 65% on the Colville River for the summer runoff period.

For more information contact your local Soil Conservation Service office.

COLVILLE - PEND OREILLE RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
PEND OREILLE RIVER bl Box Canyon 2	APR-SEP	15170.0	9550.0	63	13650.0	90	6070.0	40
	APR-JUL	13900.0	8750.0	63	12100.0	87	5400.0	39
	APR-JUN	11960.0	7775.0	65	10650.0	89	4900.0	41
CHAMOKANE CREEK	MAY-AUG	9.2	5.9	64	8.0	87	2.0	22
COLVILLE RIVER at Kettle Falls	APR-SEP	139.0	90.0	65	160.0	115	20.0	14
	APR-JUL	128.0	86.0	67	150.0	117	20.0	16
	APR-JUN	118.0	81.0	69	140.0	119	20.0	17
KETTLE RIVER nr Laurier	APR-SEP	1907.0	1400.0	73	2100.0	110	685.0	36
	APR-JUL	1807.0	1355.0	75	2060.0	114	650.0	36
	APR-JUN	1622.0	1230.0	76	1870.0	115	590.0	36
COLUMBIA RIVER at Birchbank 2	APR-SEP	44390.0	34800.0	78	42350.0	95	27525.0	62
	APR-JUL	35440.0	27800.0	78	33830.0	95	21770.0	61
	APR-JUN	25650.0	20010.0	78	24380.0	95	15650.0	61
COLUMBIA RIVER at Grand Coulee 2	APR-SEP	66460.0	48900.0	74	61150.0	92	36270.0	55
	APR-JUL	55730.0	41100.0	74	51690.0	93	30500.0	55
	APR-JUN	43420.0	46930.0	74	55180.0	127	38680.0	89

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.
ROOSEVELT	5232.0	3411.9	4712.5	3749.0
BANKS	715.0	661.5	658.7	599.0

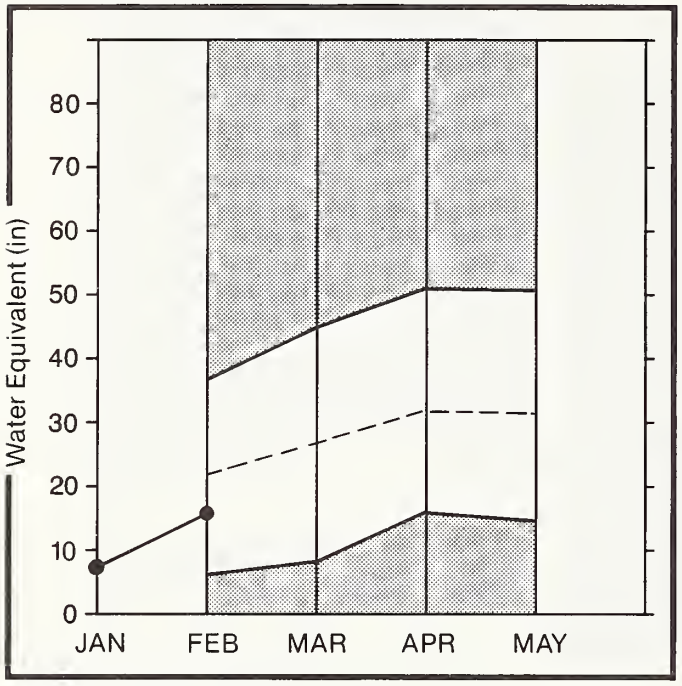
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Colville River	2	104	76
Pend Oreille River	10	88	65
Kettle River	8	95	71

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

OKANOGAN AND METHOW

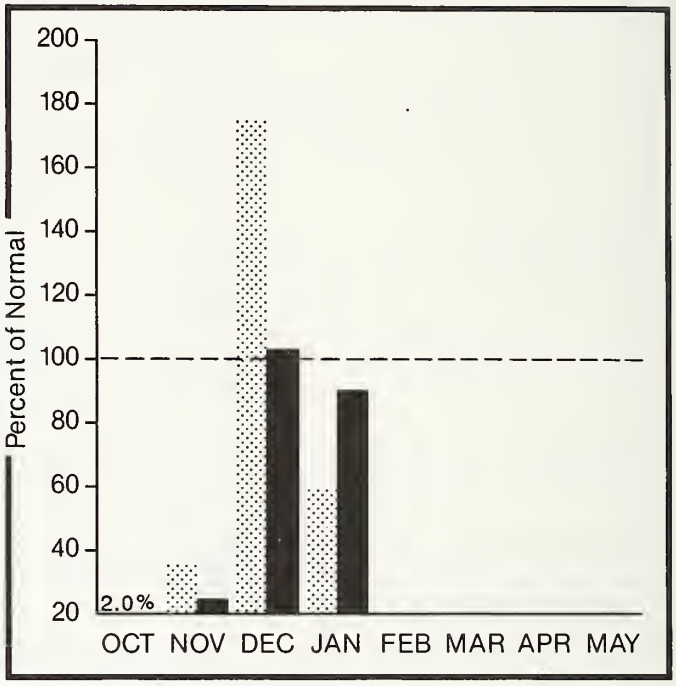
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

OKANOGAN - METHOW RIVER BASINS

WATER SUPPLY OUTLOOK:

Storage in the Conconully Reservoirs is at 12,600 acre feet which is 54% of capacity and 91% of February 1 average. Snow cover as of February 1 is 73% of average on the Okanogan-Methow Basin. Maximum snow water occurred at Harts Pass SNOTEL, elevation 6500 feet, with 24.4 inches of water. January precipitation in the Okanogan was at 58% with water year to date 89% of average. Summer runoff forecasted for the Okanogan River is 59% of normal. The Similkameen River 60% and the Methow River is 66% of normal. Okanogan River streamflow was at 49% of average for January, while on the Similkameen River it was 23% (both affected by ice). Some shallow wells are going dry in the upper Methow valley.

For more information contact your local Soil Conservation Service office.

OKANOGAN - METHOW RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
SIMILKAMEEN R. nr Nighthawk	APR-SEP	1432.0	860.0	60	1450.0	101	270.0	19
	APR-JUL	1333.0	800.0	60	1350.0	101	250.0	19
	APR-JUN	1128.0	710.0	63	1170.0	104	250.0	22
OKANOGAN R. nr Tonasket	APR-SEP	1661.0	985.0	59	1800.0	108	175.0	11
	APR-JUL	1501.0	890.0	59	1625.0	108	160.0	11
	APR-JUN	1255.0	740.0	59	1355.0	108	135.0	11
METHOW RIVER nr Pateros	APR-SEP	980.0	650.0	66	1060.0	108	240.0	24
	APR-JUL	907.0	600.0	66	1000.0	110	200.0	22
	APR-JUN	769.0	525.0	68	860.0	112	190.0	25

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.
CONCONULLY LAKE (SALMON)	10.5	7.4	8.0	7.5
CONCONULLY RESERVOIR	13.0	5.2	5.7	6.3

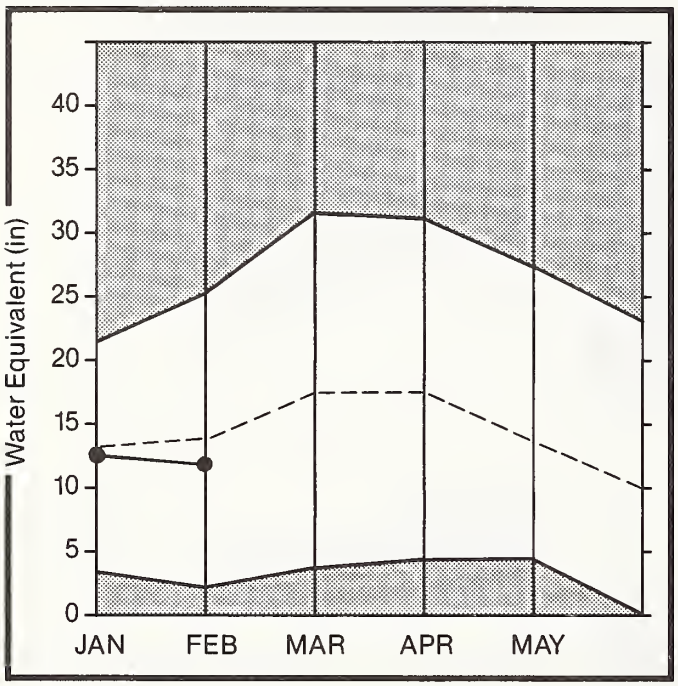
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Okanogan River	26	93	71
Methow River	4	122	74

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

WENATCHEE AND CHELAN

Mountain snowpack* (inches)



*Based on selected stations

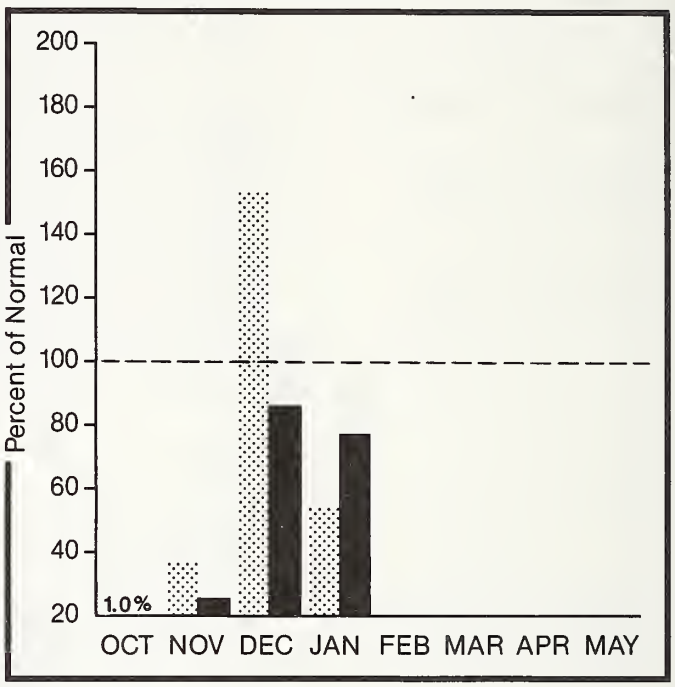
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WENATCHEE - CHELAN RIVER BASINS

WATER SUPPLY OUTLOOK:

Precipitation during January was 54% of normal in the basin and 76% for Oct. 1 to Feb. 1. Reservoir storage in Lake Chelan is at 191,700 acre feet or 43% of February 1 average and 39% of capacity. Runoff for the Wenatchee River is forecast to be 80% of normal for the summer. Forecasts in the Chelan River is 78% and 76% for the Stehekin River. Stemilt and Icicle are forecast at 83% and 81%. January streamflow within the basin was 27% of normal on the Wenatchee and 28% on the Chelan River. Snow pack in the Wenatchee-Chelan Basin is 87% of normal. Lyman Lake SNOTEL had the most snow water with 36.7 inches on February 1.

For more information contact your local Soil Conservation Service office.

WENATCHEE - CHELAN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
CHELAN RIVER at Chelan 1	APR-SEP	1184.0	925.0	78	1240.0	105	650.0	55
	APR-JUL	1040.0	815.0	78	1180.0	113	550.0	53
	APR-JUN	815.0	650.0	80	860.0	106	440.0	54
STEHEKIN R. at Stehekin	APR-SEP	844.0	640.0	76	850.0	101	500.0	59
	APR-JUL	714.0	540.0	76	740.0	104	450.0	63
	APR-JUN	541.0	420.0	78	580.0	107	350.0	65
ENTIAT RIVER nr Ardenvoir	APR-SEP	233.0	192.0	82	250.0	107	130.0	56
	APR-JUL	221.0	190.0	86	250.0	113	130.0	59
	APR-JUN	171.0	150.0	88	200.0	117	100.0	58
WENATCHEE RIVER at Plain	APR-SEP	1270.0	1015.0	80	1450.0	114	580.0	46
	APR-JUL	1113.0	925.0	83	1310.0	118	540.0	49
	APR-JUN	899.0	765.0	85	1075.0	120	450.0	50
STEMILT nr Wenatchee (miners in)	MAY-SEP	138.0	115.0	83	165.0	120	65.0	47
ICICLE CREEK nr Leavenworth	APR-SEP	370.0	300.0	81	430.0	116	170.0	46
	APR-JUL	340.0	290.0	85	410.0	121	170.0	50
	APR-JUN	270.0	235.0	87	330.0	122	140.0	52
COLUMBIA R. bl Rock Island Dam 2	APR-SEP	72250.0	53400.0	74	67920.0	94	39000.0	54
	APR-JUL	61050.0	45200.0	74	57390.0	94	32950.0	54
	APR-JUN	47730.0	35320.0	74	44400.0	93	26250.0	55

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.
CHELAN LAKE	676.1	191.7	260.5	450.6

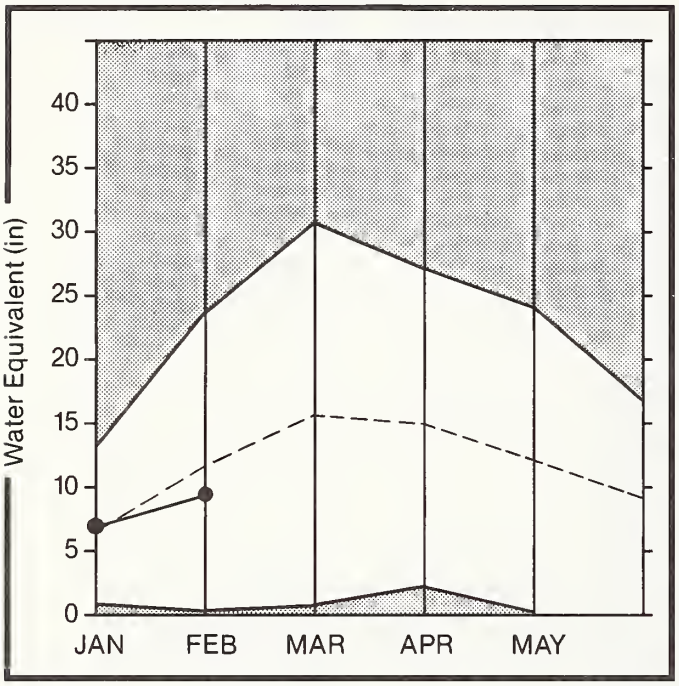
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	AVERAGE
Chelan Lake Basin	6	97	88
Entiat River	2	103	107
Wenatchee River	7	96	89
Colockum Creek	1	147	98
Squilchuck Creek	0	0	0
Stemilt Creek	2	128	91

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

YAKIMA

Mountain snowpack* (inches)



*Based on selected stations

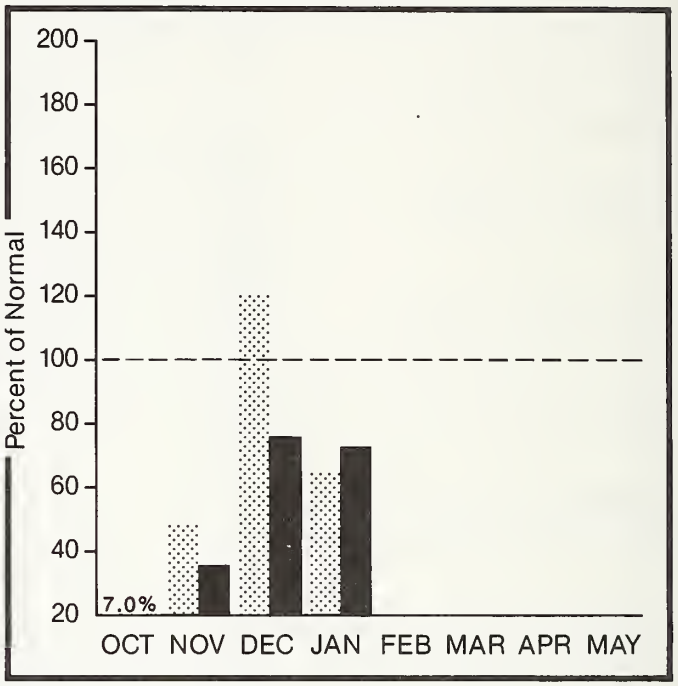
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

YAKIMA RIVER BASIN

WATER SUPPLY OUTLOOK:

January streamflow for the Yakima Basin was 41% of normal. Forecasts for the Yakima Basin runoff vary throughout the basin as follows: the Yakima River at Cle Elum 75%, Naches River 76%, the Yakima River at Parker 70% and Ahtanum Creek 81%. February 1 reservoir storage for the five major reservoirs was at 153,130 acre feet or 24% of normal. Reservoir storage is the lowest since 1933. Snow pack is 81% of average in the Yakima Basin based upon 22 snow course and SNOTEL readings. January precipitation was 64% of normal and 72% for the water year to date.

For more information contact your local Soil Conservation Service office.

YAKIMA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
YAKIMA RIVER at Martin 1	APR-SEP	136.0	110.0	81	129.0	95	90.0	66
	APR-JUL	126.0	102.0	81	120.0	95	80.0	63
	APR-JUN	112.0	91.0	81	110.0	98	70.0	63
YAKIMA RIVER at Cle Elum 2	APR-SEP	951.0	710.0	75	840.0	88	580.0	61
	APR-JUL	846.0	630.0	74	750.0	89	510.0	60
	APR-JUN	735.0	570.0	78	675.0	92	465.0	63
YAKIMA RIVER nr Parker 2	APR-SEP	2075.0	1450.0	70	2000.0	96	910.0	44
	APR-JUL	1862.0	1300.0	70	1790.0	96	810.0	44
	APR-JUN	1643.0	1150.0	70	1580.0	96	720.0	44
KACHESS RIVER nr Easton 1	APR-SEP	133.0	90.0	68	111.0	83	70.0	53
	APR-JUL	114.0	77.0	68	100.0	88	55.0	48
	APR-JUN	102.0	75.0	74	95.0	93	55.0	54
CLE ELUM RIVER nr Roslyn 1	APR-SEP	459.0	350.0	76	420.0	92	280.0	61
	APR-JUL	417.0	315.0	76	380.0	91	250.0	60
	APR-JUN	353.0	275.0	78	330.0	93	220.0	62
BUMPING RIVER nr Nile 1	APR-SEP	139.0	120.0	86	157.0	113	84.0	60
	APR-JUL	128.0	110.0	86	150.0	117	75.0	59
	APR-JUN	106.0	91.0	86	120.0	113	60.0	57
AMERICAN RIVER nr Nile	APR-SEP	121.0	92.0	76	125.0	103	60.0	50
	APR-JUL	112.0	89.0	79	120.0	107	60.0	54
	APR-JUN	94.0	77.0	82	110.0	117	50.0	53
TIETON RIVER at Tieton 1	APR-SEP	244.0	183.0	75	245.0	100	123.0	50
	APR-JUL	208.0	156.0	75	210.0	101	100.0	48
	APR-JUN	168.0	126.0	75	170.0	101	80.0	48
NACHES RIVER nr Naches 2	APR-SEP	860.0	650.0	76	890.0	103	409.0	48
	APR-JUL	779.0	590.0	76	820.0	105	370.0	47
	APR-JUN	667.0	520.0	78	710.0	106	330.0	49
AHTANUM CREEK nr Tampico 2	APR-SEP	47.0	35.0	74	54.0	115	16.0	34
	APR-JUL	43.0	32.0	74	50.0	116	15.0	35
	APR-JUN	37.0	28.0	76	45.0	122	10.0	27

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.
KEECHELUS	157.8	36.9	65.9	96.0
KACHESS	239.0	27.6	62.2	170.0
CLE ELUM	436.9	34.1	106.6	251.0
BUMPING LAKE	33.7	7.9	11.5	9.0
RIMROCK	198.0	46.0	107.0	115.0

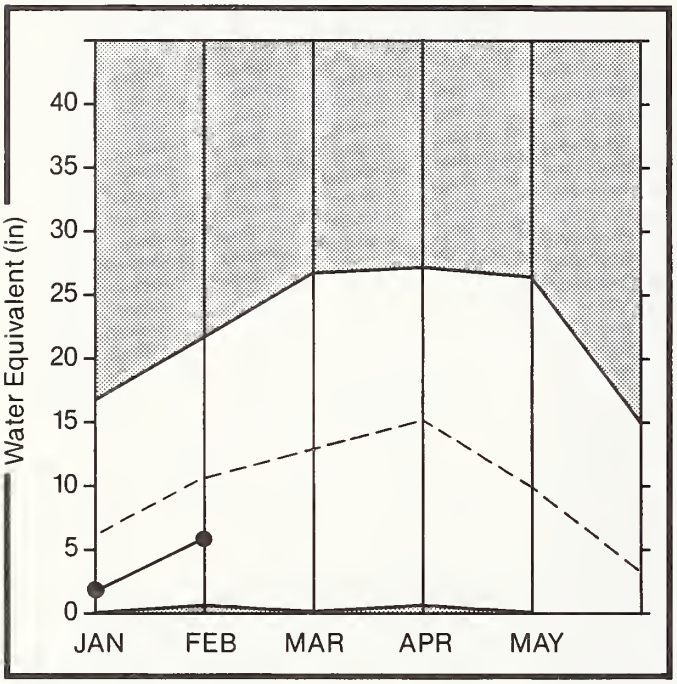
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Yakima River	16	94	83
Ahtanum Creek	2	154	108

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

WALLA WALLA

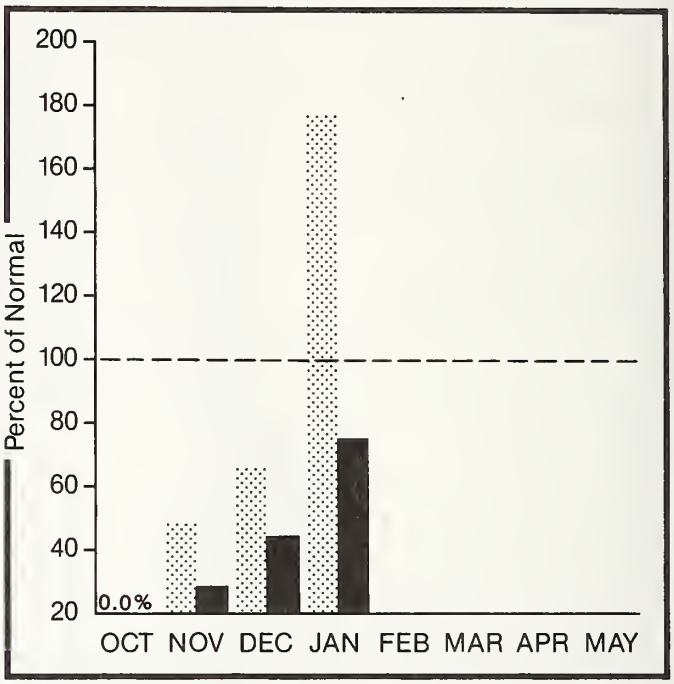
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WALLA WALLA RIVER BASIN

WATER SUPPLY OUTLOOK:

February 1 snow pack in the Walla Walla River Basin is 55% of normal. Water content at the Touchet SNOTEL site was 19.8 inches on February 1. Forecasts are for 65% of average streamflow in the Walla Walla Basin for the coming summer. Streamflow for the Snake River was at 47% of normal for January and 48% on the Walla Walla River. January precipitation was 176% of average, with Walla Walla receiving 3.3 inches of precipitation. The water year to date precipitation has been 74% of normal, up from 44% last month.

For more information contact your local Soil Conservation Service office.

WALLA WALLA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
MILL CREEK at Walla Walla	APR-SEP	17.5	10.9	62	15.0	86	5.0	29
	APR-JUL	17.3	10.8	62	15.0	87	5.0	29
	APR-JUN	17.2	10.7	62	15.0	87	5.0	29
SF WALLA WALLA nr MiltonFreewater	APR-JUL	55.0	36.0	65	50.0	91	20.0	36
COUSE CK nr Milton Freewater	APR-JUL	3.6	2.3	64	4.0	111	1.0	28
PINE CREEK nr Weston	APR-JUL	2.7	1.8	67	3.0	111	1.0	37
COLUMBIA R. at The Dalles 2	APR-SEP	101800.0	71000.0	70	93400.0	92	48600.0	48
	APR-JUL	87110.0	60900.0	70	80070.0	92	41730.0	48
	APR-JUN	70470.0	49330.0	70	64850.0	92	33825.0	48

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.

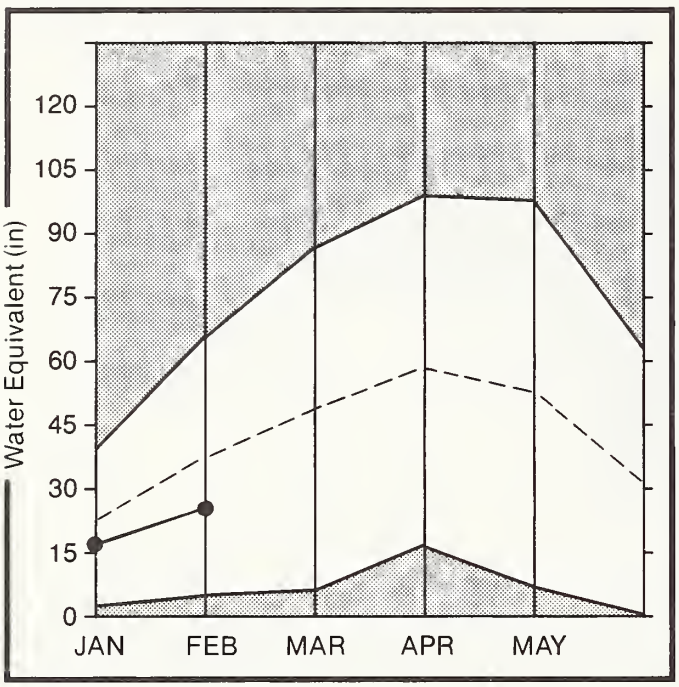
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	AVERAGE
Mill Creek	1	72	55

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

COWLITZ AND LEWIS

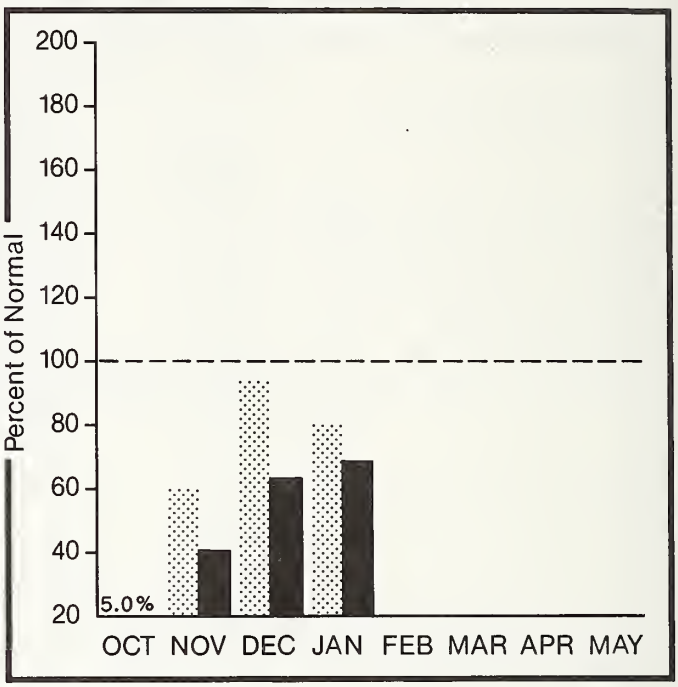
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

COWLITZ - LEWIS RIVER BASINS

WATER SUPPLY OUTLOOK:

Summer runoff forecasts for the Lewis River are 76% and for the Cowlitz River 80%. February 1 snow cover for the Cowlitz-Lewis Basin is at 69% of normal, down from 73% last month. The Strawberry Landing SNOTEL site had the maximum water content for the basin with a snow pack containing 31.8 inches of water on February 1. January precipitation was 80% of normal bringing the water year to date precipitation to 68% of average. Cougar 5E received 14.5 inches of precipitation during January.

For more information contact your local Soil Conservation Service office.

COWLITZ - LEWIS RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
LEWIS RIVER at Ariel 2	APR-SEP	1244.0	945.0	76	1490.0	120	370.0	30
	APR-JUL	1084.0	825.0	76	1300.0	120	325.0	30
	APR-JUN	958.0	730.0	76	1085.0	113	375.0	39
COWLITZ R. bl Mayfield Dam 2	APR-SEP	2036.0	1620.0	80	2440.0	120	610.0	30
	APR-JUL	1782.0	1420.0	80	2140.0	120	530.0	30
	APR-JUN	1524.0	1220.0	80	1850.0	121	590.0	39
COWLITZ R. at Castle Rock 2	APR-SEP	2687.0	2190.0	82	3225.0	120	940.0	35
	APR-JUL	2343.0	1910.0	82	2690.0	115	1130.0	48
	APR-JUN	2015.0	1650.0	82	2320.0	115	980.0	49

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.

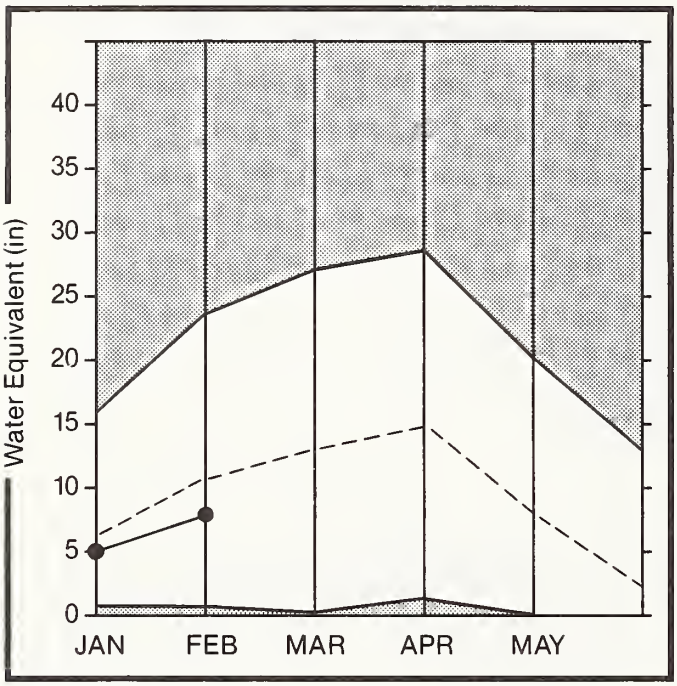
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	AVERAGE
Cowlitz River	2	80	71
Lewis River	3	77	72

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

WHITE - GREEN

Mountain snowpack* (inches)



*Based on selected stations

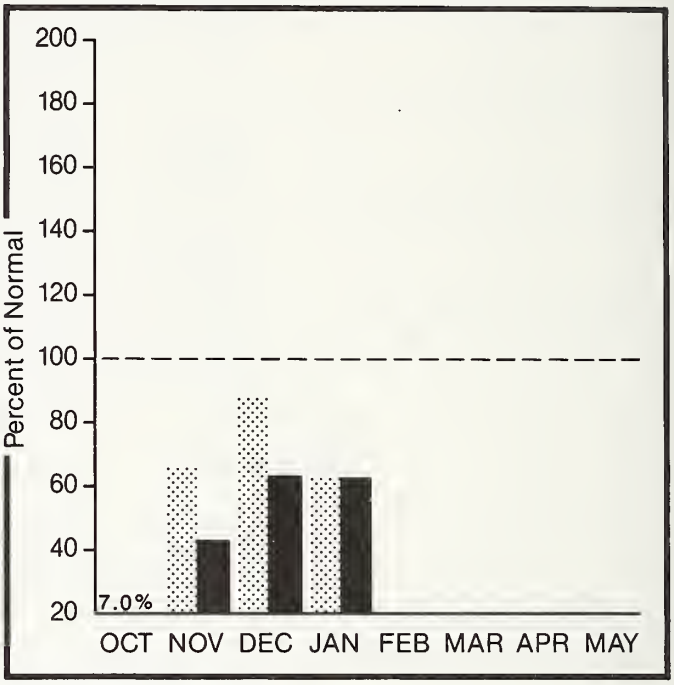
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WHITE - GREEN RIVER BASINS

WATER SUPPLY OUTLOOK:

Summer runoff is forecasted to be 70% and 75% of normal on the Green and Cedar River's. Snow water content at the Morse Lake SNOTEL site was 41.0 inches on February 1. January precipitation was 62% of normal, bringing the water year to date to 62% of average. Stampede Pass received 7.64 inches of precipitation during January. Snow pack is 83% of normal for the basin. Low flow conditions, with potential rationing are expected this summer for the west slope of the Cascade Mountains.

For more information contact your local Soil Conservation Service office.

WHITE - GREEN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
GREEN RIVER bl Howard Hanson Dam 2	APR-SEP	291.0	204.0	70	310.0	107	100.0	34
	APR-JUL	261.0	190.0	73	290.0	111	90.0	34
	APR-JUN	236.0	175.0	74	260.0	110	90.0	38
CEDAR RIVER nr Cedar Falls	APR-SEP	93.0	70.0	75	110.0	118	30.0	32

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.

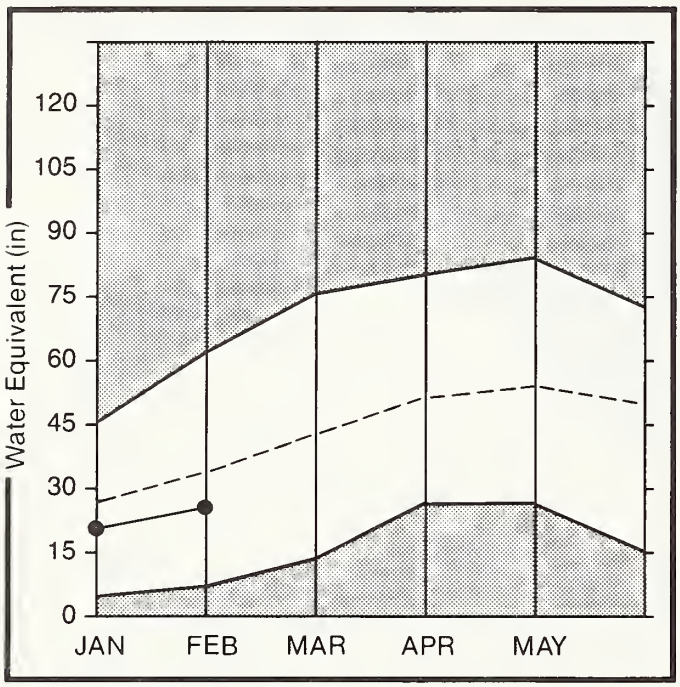
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	AVERAGE
White River	3	90	88
Green River	7	76	67

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

NORTH PUGET SOUND

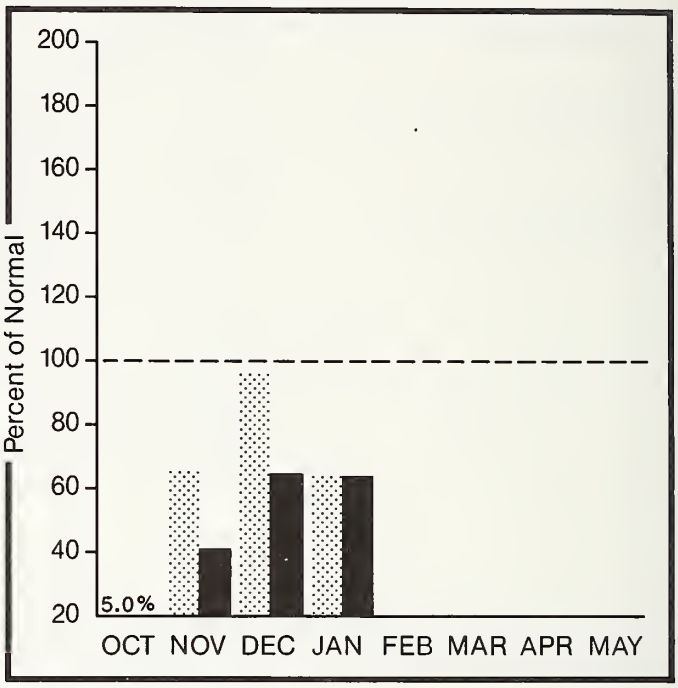
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

NORTH PUGET SOUND RIVER BASINS

WATER SUPPLY OUTLOOK:

Precipitation values for January were 64% of average with a water year to date at 64% of normal. Diablo Dam reported 8.97 inches of precipitation for January. Snow cover for February 1 in the North Puget Basin is 76% of normal with Brown Top snow course at 6000 feet in elevation having 32.0 inches of water content. Streamflow on the Skagit River during January was 48% of average. Runoff for the Skagit River is forecasted to be 75% of normal. Reservoir storage at Ross Lake is 661,500 acre feet; 76% of average for February 1

For more information contact your local Soil Conservation Service office.

NORTH PUGET SOUND RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
SKAGIT RIVER at Newhalem 2	APR-SEP	2264.0	1700.0	75	2200.0	97	1200.0	53
	APR-JUL	1891.0	1420.0	75	1850.0	98	1000.0	53
	APR-JUN	1442.0	1085.0	75	1410.0	98	760.0	53

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.
ROSS	1404.1	785.7	963.5	1033.9
DIABLO RESERVOIR	90.6	85.0	84.9	84.2
GORGE RESERVOIR	9.8	7.7	7.8	7.9

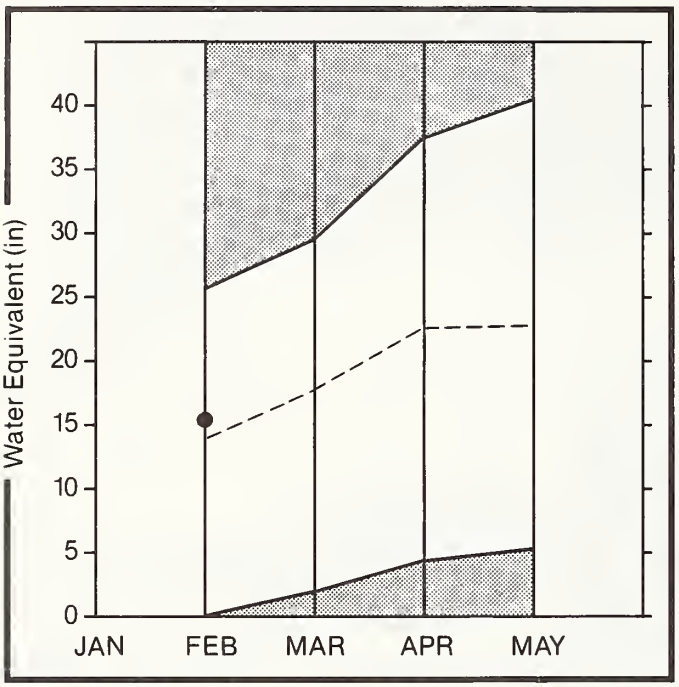
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Skagit River	13	89	76
Baker River	9	70	69
Cedar River	0	0	0
Snoqualmie River	1	84	64
Skykomish River	2	94	98

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

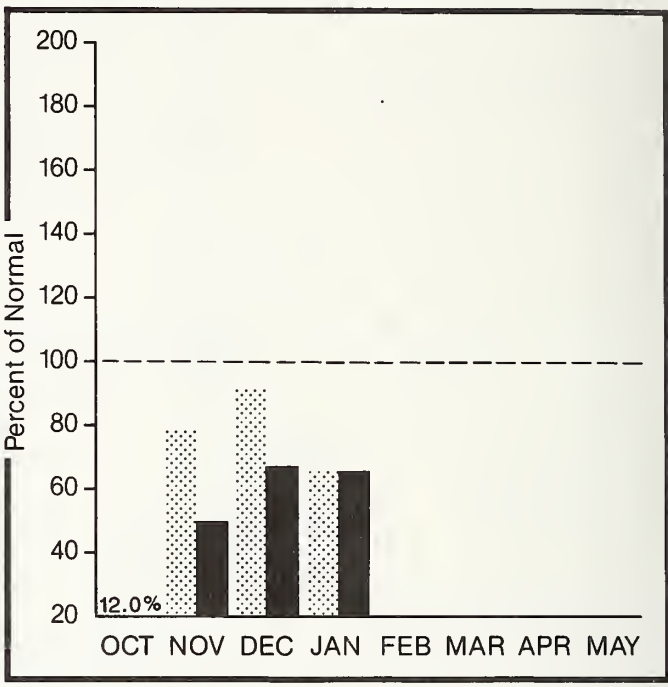
OLYMPIC

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

Maximum

Minimum

Average

Current

Monthly precipitation

Year to date precipitation

OLYMPIC PENINSULA RIVER BASINS

WATER SUPPLY OUTLOOK:

The Olympic basin is the only area in the state with above average snow cover. Hurricane snow course in the Elwha River drainage had a 48 inch snow depth with 14.8 inches of water content for 104 % of average. Maximum snow depth was at Cox valley course with 87 inches of snow and 27.7 inches of water for 109% of normal. The water year to date precipitation accumulation is 65% of normal. January precipitation was 65% of average. February 1 forecasts of runoff for streams in the basin are for 70% of average on the Dungeness River and 71% on the Elwha River.

For more information contact your local Soil Conservation Service office.

OLYMPIC PENINSULA RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
DUNGENESS RIVER nr Sequim	APR-SEP	159.0	111.0	70	150.0	94	80.0	50
	APR-JUL	129.0	90.0	70	120.0	93	60.0	47
	APR-JUN	97.0	70.0	72	90.0	93	50.0	52
ELWHA RIVER nr Port Angeles	APR-SEP	553.0	390.0	71	510.0	92	270.0	49
	APR-JUL	454.0	336.0	74	430.0	95	240.0	53

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVG.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Dungeness River	1	129	116
Morse Creek	1	104	109
Elwha River	1	110	104

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

DATA CURRENT AS OF: 2/ 5/88 7:17:52

BASIN SUMMARY OF SNOW COURSE DATA

FEBRUARY 1988

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
PEND OREILLE RIVER						
BENTON MEADOW	2370	1/31/88	10	2.4	2.4	5.1
BENTON SPRING	4920	1/31/88	30	8.2	8.6	13.2
BUNCHGRASS MEADOWS	5000	2/01/88	---	13.0E	16.5	21.3
BUNCHGRASS MDWPILLOW	5000	2/01/88	---	12.6S	17.2	20.9
CHEWALAH	4930	1/28/88	25	6.6	--	10.5
HEART LAKE TRAIL	4800	1/30/88	40	9.8	11.8	15.2
HOOOOD BASIN	6050	1/30/88	80	23.5	26.6	34.6
HOOOOO CREEK	5900	1/30/88	71	19.4	23.0	31.7
LOOKOUT	5140	2/01/88	49	12.6	16.6	23.6
NELSON CAN.	3100	1/29/88	29	7.6	9.0	11.3
SCHWEITZER BOWL	4800	1/29/88	50	16.3	15.3	21.4
SCHWEITZER RIDGE	6200	1/29/88	69	23.6	24.1	32.2
COLVILLE RIVER						
BAIRD	3220	1/28/88	20	4.4	4.2	5.8
CHEWALAH	4930	1/28/88	25	6.6	--	10.5
TOGO	3370	1/28/88	20	6.2	6.0	8.2
KETTLE RIVER						
BARNES CREEK CAN.	5300	1/26/88	39	10.8	9.3	13.6
BIG WHITE MTN CAN.	5510	1/31/88	35	9.4	11.5	12.8
BUTTE CREEK	4070	1/29/88	22	5.0	4.7	6.7
CARMI CAN.	4100	1/29/88	12	2.8	4.2	5.0
FARRON CAN.	4000	2/02/88	23	5.6	5.7	9.8
GOAT CREEK	3600	1/29/88	20	4.8	4.2	5.4
MONASHEE PASS CAN.	4500	1/26/88	27	6.9	6.4	9.4
SUMMIT G.S.	4600	1/29/88	21	4.9	4.5	5.7
TRAPPING CK LOW CAN.	3050	1/30/88	12	2.5	3.1	4.2
OMAK LAKE, TWIN LAKES						
SPOKANE RIVER						
ABOVE BURKE	4100	2/01/88	25	6.7	9.0	14.2
FOURTH OF JULY SUM	3200	2/01/88	18	5.4	6.0	7.1
LOOKOUT	5140	2/01/88	49	12.6	16.6	23.6
LOST LAKE	6110	2/01/88	75	21.0	25.8	39.1
MOSQUITO RIDGE	5200	2/02/88	57	16.2	18.8	26.2
SHERWIN	3200	1/29/88	23	6.4	6.5	9.8
SUNSET	5540	2/01/88	33	8.0	13.2	22.8
NEWMAN LAKE						
QUARTZ PEAK PILLOW	4700	2/01/88	---	10.5S	--	--
OKANOGAN RIVER						
ABERDEEN LAKE CAN.	4300	1/29/88	13	2.5	3.3	5.0
BLACKWALL PEAK CAN.	6370	1/27/88	55	16.8	23.0	23.8
BRENDA MINE CAN.	4800	1/29/88	26	5.1	8.2	9.1
BROOKMERE CAN.	3200	2/01/88	24	1.4	7.3	6.5
ENDERBY CAN.	6200	1/28/88	66	23.4	27.8	24.8
ESPERON CK. MID CAN.	4690	1/31/88	31	8.0	8.9	10.8
GREYBACK RES CAN.	5120	1/28/88	14	3.0	4.0	6.1
HAMILTON HILL CAN.	4890	1/25/88	27	6.4	6.6	10.8
HARTS PASS PILLOW	6500	2/01/88	---	24.4S	22.6	39.1
ISINTOK LAKE CAN.	5500	1/27/88	11	2.0	2.6	5.6
LOST HORSE MTN CAN.	6300	2/02/88	16	2.9	4.3	6.5
MCCULLOCH CAN.	4200	1/29/88	15	3.0	3.1	5.0
MISSEZULA MTN CAN.	5090	1/29/88	19	4.4	4.4	6.9
MISSION CREEK CAN.	5800	2/01/88	33	9.6	9.2	13.3
MONASNEE PASS CAN.	4500	1/26/88	27	6.9	6.4	9.4
MT. KOBAU CAN.	5900	1/31/88	30	8.8	5.8	8.7
MUTTON CREEK #1	5700	1/29/88	40	11.7	6.2	9.7
OYAMA LAKE CAN.	4400	1/30/88	15	3.4	3.6	5.0
POSTILL LAKE CAN.	4500	1/29/88	18	2.9	3.5	5.8
RUSTY CREEK	4000	1/29/88	21	4.8	3.9	5.3
SALMON MEADOWS	4500	1/29/88	27	6.8	5.5	7.2
SALMON MDWS PILLOW	4500	2/01/88	---	6.5S	6.2	10.3
SILVER STAR MTN CAN.	6000	1/31/88	50	16.6	17.1	19.2
SUMMERLAND RES CAN.	4200	1/28/88	17	3.3	5.6	7.0
SUNDAY SUMMIT CAN.	4300	1/28/88	15	3.1	4.0	4.8
TROUT CREEK CAN.	4690	1/29/88	16	3.4	3.9	5.6
VASEUX CREEK CAN.	4600	1/27/88	12	3.4	2.3	4.4
WHITE ROCKS MTN CAN.	6000	1/29/88	42	13.2	13.7	15.7
METHOW RIVER						
HARTS PASS PILLOW	6500	2/01/88	---	24.4S	22.6	39.1
MUTTON CREEK #1	5700	1/29/88	40	11.7	6.2	9.7
RUSTY CREEK	4000	1/29/88	21	4.8	3.9	5.3
SALMON MEADOWS	4500	1/29/88	27	6.8	5.5	7.2
SALMON MDWS PILLOW	4500	2/01/88	---	6.5S	6.2	10.3
CHELAN LAKE BASIN						
CLOUDY PASS AM	6500	1/26/88	56	19.6	19.2	27.9
LYMAN LAKE PILLOW	5900	2/01/88	---	36.7S	40.4	45.0
LITTLE MDWS AM	5280	1/26/88	88	30.8	34.0	29.7
MIRROR LAKE PILLOW	5600	2/01/88	---	24.9S	23.3	22.6
PARK CK RIDGE PILLOW	4600	2/01/88	---	34.7S	35.8	32.3
RAINY PASS PILLOW	4780	2/01/88	---	22.7S	21.8	34.3
ENTIAT RIVER						
BRIEF	1600	1/25/88	25	6.1	5.0	6.1
POPE RIDGE	3540	1/25/88	53	14.9	15.3	13.6
WENATCHEE RIVER						
BERNE-MILL CREEK	3170	1/29/88	60	18.7	21.5	20.0
BLEWETT PASS #2	4270	1/27/88	34	10.1	6.3	11.9
BLEWETT PASS#2PILLOW	4270	2/01/88	---	12.4S	12.3	18.1
CHIWAUKUM G.S.	2500	1/29/88	28	10.6	8.6	8.9
LYMAN LAKE PILLOW	5900	2/01/88	---	36.7S	40.4	45.0
MERRITT	2140	1/28/88	41	10.4	9.1	13.0
MISSION RIDGE	5000	1/26/88	39	11.4	10.3	--
STEVENS PASS PILLOW	4070	2/01/88	---	30.0S	29.8	29.7
STEVENS PASS SAND SO	3700	1/29/88	69	22.7	26.3	24.3
COLOCKUM CREEK						
TROUGH #2 PILLOW	5310	2/01/88	---	8.5S	5.8	8.7
SQUILCHUCK CREEK						
STEMILT CREEK						
STEMILT SLIDE	5000	1/26/88	36	11.1	8.3	10.5
UPPER WHEELER	4400	1/26/88	22	6.1	5.1	8.4
YAKIMA RIVER						
AHTANUM R.S.	3100	1/25/88	22	5.6	4.6	6.0
BIG BOULDER CREEK	3200	1/26/88	47	12.9	--	--
BLEWETT PASS #2	4270	1/27/88	34	10.1	6.3	11.9
BLEWETT PASS#2PILLOW	4270	2/01/88	---	12.4S	12.3	18.1
BUMPING LAKE	3450	1/28/88	36	10.6	11.9	11.8
BUMPING LAKE (NEW)	3400	1/28/88	42	13.1	13.8	14.5
CAYUSE PASS	5300	1/25/88	128	36.9	48.4	54.1
COLOCKUM PASS	5370	1/29/88	36	11.3	8.1	11.8
CORRAL PASS PILLOW	6000	2/01/88	---	21.8S	24.5	24.9
FISH LAKE PILLOW	3370	2/01/88	---	20.6S	21.9	25.6
GREEN LAKE	6000	1/25/88	58	21.8	15.9	23.4
GREEN LAKE PILLOW	6000	2/01/88	---	16.3S	9.6	14.3
20811 IS NOT ON FILE						
GROUSE CAMP PILLOW	5380	2/01/88	---	14.6S	12.0	13.6
LAKE CLE ELUM	2200	1/27/88	20	5.1	6.2	7.3
MORSE LAKE PILLOW	5400	2/01/88	---	41.0S	37.5	34.8
OLALLIE MEADOWS	3630	1/28/88	51	19.2	22.9	30.2
STAMPEDE PASS PILLOW	3860	2/01/88	---	25.1S	34.1	37.0
SASSE RIDGE PILLOW	4200	2/01/88	---	20.4S	23.5	24.8
TUNNEL AVENUE	2450	1/25/88	38	11.5	14.4	15.7
WHITE PASS E.S.	4500	1/30/88	44	12.1	12.9	16.9
WHITE PASS ES PILLOW	4500	2/01/88	---	13.6S	14.9	17.2
AHTANUM CREEK						
AHTANUM R.S.	3100	1/25/88	22	5.6	4.6	6.0
GREEN LAKE PILLOW	6000	2/01/88	---	16.3S	9.6	14.3
MILL CREEK						
HIGH RIDGE PILLOW	4980	2/01/88	---	11.4S	15.8	20.8
TOUCHET #2 PILLOW	5530	2/01/88	---	19.8S	20.4	--
LEWIS AND COWLITZ RIVERS						
CAYUSE PASS	5300	1/25/88	128	36.9	48.4	54.1
LONE PINE PILLOW	3800	2/01/88	---	15.9S	24.6	28.6
POTATO HILL PILLOW	4500	2/01/88	---	15.2S	16.5	21.2
SPENCER MDW PILLOW	3400	2/01/88	---	16.6S	25.7	19.4
SPIRIT LAKE PILLOW	3100	2/01/88	---	3.5S	5.8	10.0
STRAWBERRY L. PILLOW	3280	2/01/88	---	31.8S	31.9	35.9
SURPRISE LKS PILLOW	4250	2/01/88	---	17.1S	29.9	36.0
WHITE PASS E.S.	4500	1/30/88	44	12.1	12.9	16.9
WHITE PASS ES PILLOW	4500	2/01/88	---	13.6S	14.9	17.2
WHITE RIVER						
CAYUSE PASS	5300	1/25/88	128	36.9	48.4	54.1
CORRAL PASS	6000	1/30/88	65	23.0	22.0	--
CORRAL PASS PILLOW	6000	2/01/88	---	21.8S	24.5	24.9
MORSE LAKE PILLOW	5400	2/01/88	---	41.0S	37.5	34.8
GREEN RIVER						
COUGAR MTN. PILLOW	3200	2/01/88	---	10.7S	16.3	18.6
GRASS MOUNTAIN #2	2900	1/31/88	14	3.7	6.3	11.6
LESTER CREEK	3100	1/31/88	40	10.1	12.1	15.2
LYNN LAKE	4000	1/31/88	37	12.3	12.5	18.1
SAWMILL RIDGE	4700	1/31/88	53	17.6	26.3	24.3
STAMPEDE PASS PILLOW	3860	2/01/88	---	25.1S	34.1	37.0
TWIN CAMP	4100	1/31/88	44	15.3	17.9	16.8
CEDAR RIVER						
SNOQUALMIE RIVER						
OLALLIE MEADOWS	3630	1/28/88	51	19.2	22.9	30.2
SKYKOMISH RIVER						
STEVENS PASS PILLOW	4070	2/01/88	---	30.0S	29.8	29.7
STEVENS PASS SAND SO	3700	1/29/88	69	22.7	26.3	24.3
SKAGIT RIVER						
BEAVER CREEK TRAIL	2200	1/27/88	26	8.5	11.0	10.1
BEAVER PASS	3680	1/27/88	54	18.2	21.4	20.3
BROWN TOP AM	6000	1/27/88	97	32.0	39.6	41.7
DEVILS PARK	5900	1/27/88	66	21.6	27.0	31.0
FREEZEOUT CK. TRAIL	3500	1/27/88	25	7.7	9.5	9.3
GRANITE CREEK	3500	1/27/88	36	9.4	12.4	13.5
HARTS PASS PILLOW	6500	2/01/88	---	24.4S	22.6	39.1
KLESILKWA CAN.	3710	1/25/88	27	6.7	10.6	9.3
LYMAN LAKE PILLOW	5900	2/01/88	---	36.7S	40.4	45.0
MEADOWS CABIN	1900	1/28/88	12	4.1	3.1	5.7
NEW HOZOMEEN LAKE	2800	1/27/88	26	7.0	7.6	8.3
RAINY PASS PILLOW	4780	2/01/88	---	22.7S	21.8	34.3
THUNDER BASIN	2400	1/28/88	57	14.6	14.2	13.4
BAKER RIVER						
DOCK BUTTE AM	3800	2/01/88	90	32.4	47.2	41.6
EASY PASS AM	5200	2/01/88	88	31.1	54.4	46.5
JASPER PASS AM	5400	2/01/88	130	42.9	60.8	60.6
MARTEN LAKE AM	3600	2/01/88	91	32.8	45.6	49.2
MT. BLUM AM	5800	2/01/88	67	23.6	40.8	42.8
ROCKY CREEK AM	2100	2/01/88	38	14.4	15.2	20.5
SCHREIBERS MDW AM	3400	2/01/88	74	27.8	38.4	35.6
SF THUNDER CK AM	2200	2/01/88	4	1.4	.0	7.0
WATSON LAKES AM	4500	2/01/88	86	30.4	37.6	39.5
DUNGENESS RIVER						
DEER PARK	5200	2/01/88	52	16.1	12.5	13.9
MORSE CREEK						
COX VALLEY	4500	1/29/88	87	27.7	26.6	25.5
ELWHA RIVER						
HURRICANE	4500	1/27/88	48	14.8	13.4	14.2

RANCHING TIPS FOR WATER-SHORT YEARS

Forage production on range and dry pasture depends entirely on natural moisture. While overgrazing does damage to perennial plants during a season of normal moisture, it is more severe during a drought year. It reduces plant vigor, stops root and leaf growth, reduces ground cover, and invites accelerated erosion. Once erosion begins, it gets worse each year, further reducing plant vigor and forage production. This process is difficult to reverse.

Rather than risk permanent damage to grazing resources start planning a strategy early. For example:

- reduce livestock numbers to balance with forage supply
- cull herds more than normal
- sell calves and lambs early

determine forage needs and buy needed supplements early

- grow small grains or sorghums for hay or pasture (these use less water than conventional forage crops)
- defer planting perennial pasture, hay or range seedings until a year with more favorable water outlook
- keep spring developments, stock tanks, float valves and pipeline in good working order so water is not wasted
- use evaporation retardant on ponds and tanks
- prepare for hauling stock water
- give spring development high priority (even mediocre springs will be helpful)
- check with local SCS and ASCS offices to learn if cost-share programs are available to help with spring developments or other water conservation practices
- don't overgraze or otherwise disturb streambank vegetation (it will help prevent erosion, reduce sediment, and provide food and cover for wildlife)

Remember, if a unit must be abused, well-established seedings can tolerate overgrazing better than native range.

Wildlife will suffer during a drought as much or more than domestic livestock. The wildlife that share your land is a valuable natural resource.

To help wildlife:

- include features at stock water developments which will allow small animals and birds safe access to water (these are usually not expensive and are easily installed)
- fence ponds and springs and install collector pipes to deliver water to a tank or trough. This will improve water quality and quantity for livestock, as well as provide lush vegetation for small animals and birds.

Other places for information or assistance:

- check with local ASCS office for possible special practices or cost-sharing that might assist with irrigation on your farm or ranch this year.

- maintain contact with Farmers Home Administration for special local programs available.

- maintain contact with the local Cooperative Extension Service office for agricultural and marketing conditions.

If you belong to an irrigation district, contact irrigation officials throughout the season to learn about current water availability and water supply forecasts.

For more information concerning your crop, and soil and water conditions, contact the local Conservation District Office.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

Canada:

Ministry of the Environment, Water Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
  Corps of Engineers
U.S. Department of Agriculture
  Forest Service
U.S. Department of Commerce
  NOAA, National Weather Service
U.S. Department of the Interior
  Bonneville Power Administration
  Bureau of Reclamation
  Geological Survey
  National Park Service
  Bureau of Indian Affairs

Local:

City of Tacoma
City of Seattle
Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company
Snohomish County P.U.D.
Colville Confederated Tribes

Private:

Okanogan Irrigation District
Wenatchee Heights Irrigation District
Newman Lake Homeowners Association

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROOM 360, U.S. COURT HOUSE
SPOKANE, WASHINGTON 99201

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

THIRD-CLASS BULK RATE
POSTAGE AND FEES PAID
USDA - SCS
SPOKANE, WA
PERMIT NO G-267

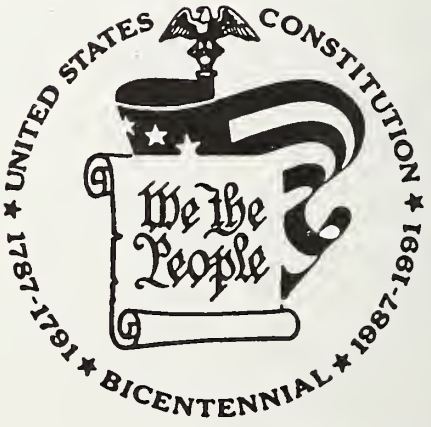
THIRD CLASS MAIL

Washington
Water Supply Outlook

and

Federal — State — Private
Cooperative Snow Surveys

SOIL CONSERVATION SERVICE



☆ GPO 1988 591-071